IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. (Currently Amended) A method of wavelet filtering a digital image, the digital image comprising a plurality of pixels ~~arranged in one or more bands of pixels~~, the method ~~performing~~ comprising the following steps performed for each ~~one of said~~ of one or more bands of [[said]] pixels:

retrieving a plurality of previous partial results from a ~~first or second~~ local storage or a remote storage, said plurality of previous partial results comprising a pixel and a coefficient, the local storage having a greater bandwidth than the remote storage;

inputting a current group of adjacent [[said]] pixels in a current band;

computing coefficients and a plurality of current partial results ~~utilising said~~ utilizing the current group of adjacent pixels and ~~said~~ the plurality of previous partial results, the plurality of current partial results comprising a pixel and a coefficient;

outputting ~~said~~ the coefficients; and

storing [[a]] the plurality of current partial results in said [[first]] local storage if ~~said~~ the current group of adjacent pixels is not ~~the~~ a last group in the band, or in said ~~second~~ remote storage if ~~said~~ the current group of adjacent pixels is the last group in the band.

2. (Currently Amended) A method as claimed in claim 1, wherein said [[first]] local storage is a ~~local storage~~ register.

3. (Currently Amended) A method as claimed in claim 1 or 2, wherein said ~~second~~ remote storage is ~~a remote storage~~ an external buffer.

4. (Currently Amended) A method as claimed in claim 1, wherein ~~said~~ the digital image is an original image and said wavelet filtering performs a forward wavelet transform.

5. (Currently Amended) A method as claimed in claim 1, wherein ~~said~~ the digital image is a sub-band of an original image and ~~said~~ the pixels are coefficients and said wavelet filtering performs a forward wavelet transform.

6. (Currently Amended) A method as claimed in claim 1, wherein ~~said~~ the digital image is one or more associated sub-bands of an original image, and ~~said~~ the pixels are coefficients and said wavelet filtering performs an inverse wavelet transform.

7. (Original) A method as claimed in claim 1, wherein said method further comprises:

repeating said retrieving, inputting, computing, outputting, and storing steps in sequence a plurality of times.

8. (Original) A method as claimed in claim 4 or 5, wherein said computing step is calculated in accordance with a 5/3 forward wavelet transform.

9. (Currently Amended) A method as claimed in claim [[4]] 6, wherein said computing step is calculated in accordance with a 5/3 inverse wavelet transform.

10. (Currently Amended) A method as claimed in claim [[2]] 4, wherein said computing step is calculated in accordance with a 9/7 forward wavelet transform.

11. (Currently Amended) A method as claimed in claim [[4]] 6, wherein said computing step is calculated in accordance with a 9/7 inverse wavelet transform.

12. (Currently Amended) A method as claimed in claim ~~2, wherein said plurality of partial results stored in local storage comprises a pixel and a coefficient~~ 1, wherein the pixel and the coefficient of the previous partial results are, respectively, a last input pixel and a last high pass coefficient.

13. (Currently Amended) A method as claimed in claim [[2]] 1, wherein ~~said~~ the plurality of partial results ~~stored in said local storage~~ comprises ~~a pixel,~~ intermediate values~~, and a coefficient~~.

14. (Currently Amended) Apparatus for wavelet filtering a digital image, the digital image comprising a plurality of pixels ~~arranged in one or more bands of pixels~~, the apparatus comprising:

means for retrieving, for each ~~one of said~~ of one or more bands of pixels, a plurality of previous partial results from a ~~first or second~~ local storage or a remote storage, the plurality of previous partial results comprising a pixel and a coefficient, the local storage having a greater bandwidth than the remote storage;

means for inputting, for each ~~one of said~~ of one or more bands of pixels, a current group of adjacent [[said]] pixels in a current band;

means for computing coefficients and a plurality of partial results, for each ~~one of said~~ of one or more bands of pixels, ~~utilising said~~ the current group of adjacent pixels and ~~said~~ the plurality of previous partial results, the plurality of current partial results comprising a pixel and a coefficient;

means for outputting, for each ~~one of said~~ of one or more bands of pixels, ~~said~~ the coefficients; and

means for storing [[a]] the plurality of current partial results in said [[first]] local storage if ~~said~~ the current group of adjacent pixels is not ~~the~~ a last group in the band, or in said ~~second~~ remote storage if ~~said~~ the current group of adjacent pixels is the last group in the band.

15. (Currently Amended) Apparatus as claimed in claim 14, wherein said [[first]] local storage is a ~~local storage~~ register.

16. (Currently Amended) Apparatus as claimed in claim 14 or 15, wherein said ~~second~~ remote storage is ~~a remote storage~~ an external buffer.

17. (Currently Amended) A computer readable medium comprising a computer program for wavelet filtering a digital image, the digital image comprising a plurality of pixels ~~arranged in one or more bands of pixels~~, the computer program comprising:

code for retrieving, for each ~~one of said~~ of one or more bands of pixels, a plurality of previous partial results from a ~~first or second~~ local storage or a remote storage, the plurality of previous partial results comprising a pixel and a coefficient, the local storage having a greater bandwidth than the remote storage;

code for inputting, for each ~~one of said~~ of one or more bands of pixels, a current group of adjacent [[said]] pixels in a current band;

code for computing coefficients and a plurality of partial results, for each ~~one of said~~ of one or more bands of pixels, ~~utilising said~~ utilizing the current group of adjacent pixels and ~~said~~ the plurality of previous partial results, the plurality of current partial results comprising a pixel and a coefficient;

code for outputting, for each ~~one of said~~ of one or more bands of pixels, ~~said~~ the coefficients; and

code for storing [[a]] the plurality of current partial results in said [[first]] local storage if ~~said~~ the current group of adjacent pixels is not ~~the~~ a last group in the band, or in said ~~second~~ remote storage if ~~said~~ the current group of adjacent pixels is the last group in the band.

18. (Currently Amended) A computer readable medium as claimed in claim 17, wherein said [[first]] local storage is a ~~local storage~~ register.

19. (Currently Amended) A computer readable medium as claimed in claim 17 or 18, wherein said ~~second~~ remote storage is a remote storage.

20. (Currently Amended) A wavelet filter for wavelet filtering a digital image, the digital image comprising a plurality of pixels ~~arranged~~ processed in one or more bands of pixels, the filter comprising:

a [[first]] local storage for storing a plurality of previous partial results, the plurality of previous partial results comprising a pixel and a coefficient;

a [[second]] remote storage for storing a plurality of previous partial results, the plurality of previous partial results comprising a pixel and a coefficient, the local storage having a greater bandwidth than the remote storage;

a controller for selecting the plurality of previous partial results from said ~~first or second~~ local storage or said remote storage;

a pixel input mechanism for inputting a current group of adjacent [[said]] pixels in a current band;

a lifting lattice of multiplier and adder units for computing coefficients and a plurality of current partial results utilizing the ~~utilising said~~ current group of adjacent pixels and ~~said~~ the selected plurality of previous partial results, the plurality of current partial results comprising a pixel and a coefficient;

output means for outputting ~~said~~ the coefficients; and

a controller for storing [[a]] the plurality of current partial results in said [[first]] local storage if ~~said~~ the current group of adjacent pixels is not ~~the~~ a last group in the band, or in said ~~second~~ remote storage if ~~said~~ the current group of adjacent pixels is the last group in the band.

21. (Currently Amended) A wavelet filter as claimed in claim 20, wherein said [[first]] storage is a ~~local storage~~ register.

22. (Currently Amended) A wavelet filter as claimed in claim 20 or 21, wherein said ~~second~~ remote storage is ~~a remote storage~~ an external buffer.

23. (Currently Amended) A wavelet filter as claimed in claim 20, wherein said pixel input [[means]] mechanism comprises a plurality of multiplexers for selecting in turn a group of pixels as ~~said~~ the current group.

24. (Currently Amended) A wavelet filter as claimed in claim 20, wherein ~~said~~ the digital image is an original image and said wavelet filtering performs a forward wavelet transform.

25. (Currently Amended) A wavelet filter as claimed in claim 20, wherein ~~said~~ the digital image is a sub-band of an original image and ~~said~~ the pixels are coefficients and said wavelet filtering performs a forward wavelet transform.

26. (Currently Amended) A wavelet filter as claimed in claim 20, wherein ~~said~~ the digital image is one or more associated sub-bands of an original image, and ~~said~~ the pixels are coefficients and said wavelet filtering performs an inverse wavelet transform.

27. - 29. (Canceled)